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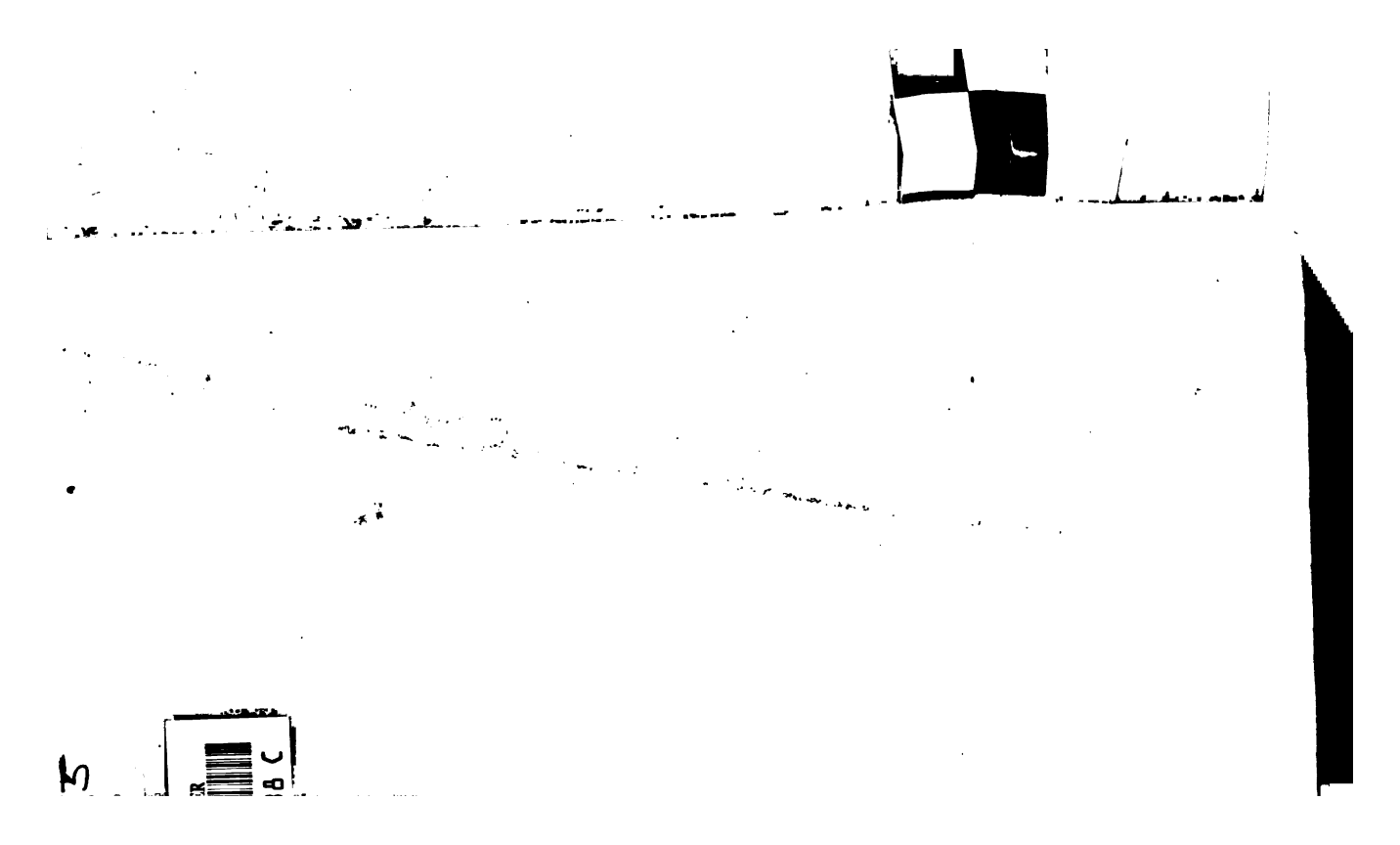

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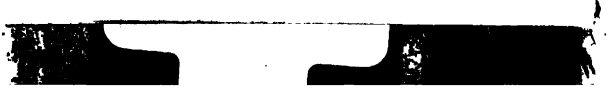

MNEMONICS:

OR,

THE NEW SCIENCE OF

ARTIFICIAL MEMORY;

EXPLAINED IN ITS APPLICATION TO THE STUDY OF NUMBERS, THE SCIENCES, AND TO THE USEFUL OCCUPATIONS OF LIFE:

WHEREBY

THE NATURAL MEMORY

IS GREATLY ASSISTED AND STRENGTHENED.

Illustrated by Diagrams and Engravings.

THE WHOLE ADAPTED TO THE PURPOSE OF

SELF-INSTRUCTION IN THE ART.

ONSTAT MEMORIAM HABERE QUIDDAM ARTIFICIA ET NON OMNEM A NATURA PROFICISCI.

CICERO.

NEW-YORK:

PUBLISHED FOR THE PROPRIETOR BY

JAMES MOWATT & CO., No. 174 BROADWAY,

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PREFACE.

As the science of Mnemonics is attracting great attention at this time, we have thought that a work conveying the rules of the founder of the art, M. Feinaigle, would not be unacceptable. In doing this, we have no wish to detract from the great original merits of M. Gouraud, who is deservedly reaping a substantial harvest by his labors, and whose oral instructions are unquestionably important to a full appreciation of the subject. It is admitted, however, we believe on all hands, that Feinaigle is the founder of the system; and we here present the reader with such an outline of it, as, by a little reflection, he can fill up.

It will be seen from the history of Feinaigle's career in England, that his instructions were attended with results quite as remarkable as those which have been evinced among the pupils of M. Gouraud. We do not doubt, however, that the latter has engrafted many improvements on the system, which entitle him to a distinction not inferior to that of the inventor. T. W. D.

New-York, March 20, 1844.

MNEMONICS:

OR,

THE NEW ART OF MEMORY.

CHAPTER I.

The recollection which ordinary memories possess, appears to be resolvable into two principal sources, the vivacity of the impression, and association.

But the principal expedient for assisting the memory is derived from association. For instance, when I see a house, I naturally recollect the inhabitants, their manner of life, and the intercourse I have had with them. The sight of a book prompts the memory of its contents, and the pleasure or profit I have received from the perusal of it. A view of the sea may suggest the idea of a storm, and the painful recollection of the loss of property, or of the life of a friend, by shipwreck. The act, then, of aiding recollection by association, is to connect thoughts, remote or abstract, with others more obvious and familiar, that the recurrence of the latter may bring along with it the memory of the former. Thus the sight of my ring, which I cannot miss to observe, reminds me of the action, to suggest the remembrance of which I moved it from one finger to another. The ringing of the bell, or the sounding of the clock, prompts the recollection of the business I had resolved to perform at these times. A glimpse of the first words of a paragraph, or a page, introduces the recollection of the whole. In a word, we must connect the things we wish

to remember with the immediate objects of our senses, that offer themselves daily to our attention, but particularly with the objects of our sight, the most vigorous and lively of all our senses, and of which the objects are, perhaps, more numerous than those of all our other senses put together.

This theory is the foundation of all contrivances which have been, or perhaps can be, employed to help the recollection. It is the groundwork of the famous artificial memory of Simonides, a lyric poet of the island of Ceos, one of the Cyclades, who flourished in the sixty-first Olympiad—about five hundred and thirty-five years before the birth of Christ—and who is celebrated by Cicero and Quinctillian. Both these authors relate the following mythological incident on the occasion, which suggested the invention.

Simonides was employed by Scopas, a rich Thessalian, to compose a panegyric on him for a certain sum of money; was invited to a festival, given by Scopas to his friends, in order to rehearse it, but was sordidly refused more than half the stipulated compensation, because, puzzled, perhaps, with the sterility of the principal subject, he had introduced a long episode, amounting to half the poem, in praise of Castor and Pollux. Simonides soon found an avenger of the insult. He was immediately summoned from the company, by two young men on horseback, supposed to be Castor and Pollux in disguise, who appeared to protect their favourite poet; and who, as soon as they had saved Simonides, made the roof fall on Scopas and his company, bruising them so to death that not a lineament of them could be known. Simonides, by recollecting the manner in which they sat at table, was enabled to distinguish them, and to deliver them to their friends for burial. The aid which the recollection of the poet received on this occasion, is said to have suggested the idea of an artificial memory.

The principle of the scheme of Simonides, is to transfer a train of ideas, the archetypes of which are not the objects of sense, and are, therefore, of difficult recollection, to another train which we cannot miss to recollect, because the

archetypes are not only objects of sense, but objects of sight, with which archetypes we are perfectly familiar; or which may be placed actually before our eyes. Suppose, then, Simonides were to commit to memory a discourse, consisting of speculations concerning government, finances, naval affairs, or wisdom, none of the archetypes of which could be made objects of sense, at least at the time of delivery; and to assist his recollection, he were to connect the series of ideas in that discourse with a series of objects which he could either place in sight, or with which he was so familiar, that he could not fail to recollect them; he would proceed in the following manner: He would take a house for instance, either the one in which he might deliver the discourse, or another; with every part of which he was perfectly acquainted. He would begin at some fixed point of that house, suppose at the right side of the door, and he would proceed round it in a circular line, till he arrived at the point from which he set out. He would divide the circumference of the house into as many parts as there were different topics or paragraphs in the discourse. He would distinguish each paragraph by some symbol of the subject it contained; that on government, by the symbol of a crown, or a sceptre; that on finances, by the symbol of some current coin; that on naval affairs, by the figure of a ship; that on wisdom, by the figure of the goddess who presided over it. He would either actually transfer, or suppose transferred, these symbols to the different compartments of the house, and then all he had to do, in order to recollect the subject of any paragraph, was, either to cast his eye on the symbol during delivery, or to remember upon what division the symbol was placed. The memory, by this contrivance, easily recalled the discourse. The orator either saw, or could not fail to remember the compartments, because he was perfectly familiar with them. Neither could he forget the symbols of each paragraph, because they were no more than hieroglyphical paintings of the sense.

In the place of a house, we may assume, according to Quinctilian, a public building, the walls of a city, a well-

known road, or a picture, to divisions of which we may re-
fer our symbols. Metrodorus assumed the circle of the
zodiac, which he divided into 360 compartments, equal to
the number of degrees of which it consists, making a com-
partment of each degree.

Some people carried this art so far as to comprehend
the words of a discourse, by constructing symbols for each
of them, and referring, in like manner, these symbols to
compartments. This seems to have constituted nearly
what we call short-hand writing, except that our short-
hand writers oblige themselves to commit to memory the
meaning of their symbols, and pretend not to refer them
to any more familiar objects. Quinctilian accordingly ob-
serves, that this pretended improvement terminated in con-
fusion, and embarrassed, much more than it assisted, re-
collection. However much, therefore, he might prize the
scheme of Simonides, he rejected this supplement as re-
gatory or detrimental.

Such were the origin and principles of the celebrated
topical memory of the ancients; from which source are
derived all the various systems of local and symbolical
memory, that have been practised from the fourteenth cen-
tury to the present time.

In March, 1807, M. Gregor Von Feinaigle, a native of
Baden, visited Paris, and delivered Lectures on his "New
System of Mnemonics and Methodics." In the *Philosophi-
ical Magazine* for June, 1807, there is the following ex-
tract from a letter written by M. Fichtel at Paris, to a
friend in London, giving some account of M. Van Feina-
gle's exhibitions there.

"Paris, 2d March, 1807.

"During my residence in this metropolis I heard a great
deal of a new method of *mnemonique*, or of a method to
assist and fix our memory, invented by Gregor de Feina-
gle. Notwithstanding the simplicity with which he an-
nounced his lectures in the papers, I could not determine
myself to become a pupil of his, as I thought to find a
quack or mountebank, and to be laughed at by my friends
for having thrown away my cash in such a foolish man-
ner. Perhaps I should hesitate to this moment about the

tility of this new invented method to assist our natural memory, had I not had the pleasure of dining at his excellency's the Count of Metternich, the Austrian ambassador, who followed with all his secretaries, the whole course of lectures: they all spoke very advantageously of it, likewise several other persons of the first rank I met there; in consequence of this I was inserted into the list of pupils, and I follow, at this moment, the lectures. All I can tell you about this method is: it is a very simple one, and easy to be learned, adapted to all ages and sexes; all difficulties in sciences as require an extraordinary good memory, for instance, the names and epochs in history, are at once overcome and obviated. There is not one branch of science to which this method cannot be applied. It is easy to be perceived that such an invention cannot pass without some critique, and even sarcasms, in the public prints: some of them were very injurious, and plausible enough to mislead the public, who, knowing nothing of the method, are always more ready to condemn than to assist. Mr. Feinaigle, to answer all these critics at once, adopted a method not less public for Paris than the public papers, but less public for the rest of Europe; he gave, the 22d of last month, a public exhibition to about 2000 spectators, in which he did not appear at all, only about 12 or 15 of his pupils; each of them made such an application of the method as his situation in life required. The principal parts were the following: history about names and years; geography with respect to longitude, number of inhabitants, square miles, &c., &c.; grammer in various languages, about different editions of the same work; pandects, their division, and title of each book, title, &c.; different systems of botany, poetry, arithmetic, &c. &c. At last one desired the company to give him one thousand words, without any connection whatsoever, and without numeric order; for instance, the word *astronomer*, for No. 62; *wood*, for No. 188; *lovely*, for No. 370; *dynasty*, for No 23; *David*, for No. 99, &c. &c. till all the numbers were filled; and he repeated the whole (notwithstanding he heard these words, without order, and but once,) in the numerical order; or he told you what word was given

against any one number, or what number any one wo bore. It is still more striking, but certainly, likewi more difficult, to retain as many numbers, however gre they may be. For words and numbers I could ventu myself, with the greatest safety, as far as one hundred each; and I am sure, after having fixed them once, whi is done in less than ten minutes, I could repeat them you at any period, without ever thinking any more them.

"M. Feinaigle is about to visit England."

To the testimony of M. Fichtel may be added that the celebrated French astronomer, M. Lalande, who sa "I have witnessed the extraordinary effects produced the memory, by the method of M. de Feinaigle: one of h pupils is able to repeat, in any order, without the le mistake, a table of fifty cities in all parts of the wo with the degrees of longitude and latitude in which th are situated; the same is the case with chronology: the *Annuare*, I have inserted 240 dates from ancient modern history, and M. de Feinaigle's scholars rep them all—an astonishing aid in the study of geograp and history!"

In the *Monthly Magazine* for September, 1807, th is a letter under the signature of *Common Sense*, wh though somewhat illiberal in its remarks, displays, c siderable knowledge of the *principles* of the "local s bolical Memory."

"Any person (says this writer) who wishes to tr experiment on the power of association, need only m use of the succession of rooms, closets, stair-cases, land places, and other remarkable spots or divisions, of his house, with all the parts of which he may be suppose be very familiar. Let him apply any word or any ide the several parts of the house, in any determined orde their succession, and he will find it almost impossibl recalling the same order of the parts of the house, n associate the idea or word which he had previously nexed to each part. Thus, for example, a person learn the succession of the Kings of England in ten utes, by annexing the names of each succeeding mon

to the successive rooms, closets, and principal parts of his own house, beginning at the upper story, and regularly descending; or, at the lower story, and regularly ascending.

"Any other permanent and familiar class of objects will, in general, answer the purpose better than the rooms of the house. I was myself educated in the vicinity of Oxford-street, and streets running out of that street south and north (beginning at Charles-street, Soho-square, and proceeding to Dean-street, Chapel-street, and so on to Park-lane, and down on the other side to Rathbone-place and Hanway-yard), are the permanent and familiar set of objects, which I make use of for my own purpose of successive association. The counties in England, the kingdoms and the countries throughout the world, the villages, and other objects on a great road, or the streets of a city, are all well suited to this business of association; and either of them may be taken indifferently by various persons, according to their acquaintance with them. The greater the variety of ideas connected with this set of objects, which may be called *the associating key*, the more easy and the more certain is the power of recollection.

"If I do not hazard a charge of egotism, I shall mention, as illustrative facts, that by this new art I once committed to memory, in a single morning, the whole of the propositions contained in the three first books of Euclid, and with such perfection, that I could for years afterwards specify the number of the book on hearing the proposition named, and could recite the proposition on hearing the number and the book; and I have frequently, in mixed companies, repeated backwards and forwards from fifty to an hundred unconnected words, which have been but once called over to me. I may also add, to prove the simplicity of the plan, that I taught two of my own children to repeat fifty unconnected words in a first lesson, of not more than half an hour's continuance."

M. Von Feinaigle visited England some time in the early part of 1811. In order to exhibit a detail of his progress in this country, we have made some extracts

from the Periodical Works and Public Papers which gave an account of his various *experiments.*

"On the 22d of June, 1811, M. Von Feinaigle gave at the *Royal Institution,* a public experiment of the efficacy of his *Method of facilitating and assisting Memory.* The managers of the Institution, in consequence of the application of the Committee of Literature and Science, granted permission for this public display of the art, without, however, making themselves in any way responsible as to its character. The exhibition took place before an assembly of several hundred ladies and gentleman, who were astonished and delighted with the result of the experiment. Four children, two boys and two girls, under 14 years of age, had been put under Mr. Feinaigle's care but two or three days before: he had one of the girls but an hour and a half; and the longest tuition that any of them had received was but four hours and a half.—One of them repeated Goldsmith's *Hermit* backward and forward, and stated the stanzas, the line, and the order of any remarkable word required of him.—One little girl answered to questions in the chronology of the Roman Emperors, and another multiplied, without slate or paper, *two* sums of *eight* figures by *eight*, and declared that she had not previously been taught arithmetic.—A boy determined the geographical situation, in degrees and minutes, of 50 different cities; and on a planisphere chalked out on a board, marked down the true situation of places named to him. —Mr. Fincher, of the Institution, also recited the Mineralogical Tables of Hauy, the second part of which he had taught himself on Mr. Feinaigle's system, together with the first part of Brisson's Ornithologic System; and he declared, from his own experience, that the principles of Mr. Feinaigle's art were equally calculated to give facility in the acquisition, and certainty in the retention, of the tables of any other science—a fact which was confirmed by several gentlemen present, who have attended the private courses of the professor.

"The examinations were carried on by Mr. Disney, Chairman of the Literary and Scientific Committee; and for

great part of the time, Mr. Feinaigle retired from the Lecture-room. Nothing could be more satisfactory than the result of the experiments; and the company returned Mr. Feinaigle their thanks. The Professor, *Aug.* 26, repeated the experiment at *Liverpool*, where the Rev. Jonathan Brookes, at the request of the Mayor, selected from the different charity-schools of the town, children upon whom the experiment might be made. The exhibition took place before a very numerous assembly. Four children had been put under Mr. Feinaigle's tuition but three days before, two boys and two girls, and none of them had received more than two hours' instruction; neither of the girls could make or read a figure when first presented to him. The examinations (which were carried on by the Rev. Jonathan Brookes) were precisely of the same nature as those at the Royal institution; and the results were equally satisfactory."

On the 6th April, 1812, the effects of M. Von Feinaigle's system were exemplified at the *Surrey Institution*, before a numerous assembly of proprietors and subscribers, by the examination of five young persons, who had previously been committed to the care of M. Von Feinaigle.

1. Master H. S. (13 years of age) determined the geographical situations of *fifty* principal towns in different parts of the globe, assigning to each its longitude in degrees and minutes, and named the country in which it is found. He also marked on a blank planisphere the true situation of the towns named to him.

2. Miss P. K. (11 years of age) repeated fifty stanzas of four lines each, from the second part of Mrs. Moore's "Sir Eldred of the Bower." These she repeated consecutively, and in any order desired. On any remarkable word being mentioned, she determined the stanza, the line, and the place of the line, in which it was to be found; and also how many times the same word occurred in the Poem.

3. Miss M. A. K. (15 years of age) answered to all the declensions, as well of substantives as adjectives, of the Latin Language; and gave a full account of all the

conjugations, both active and passive, without any previous knowledge of that language.

4. Miss S. S. (of the same age with the preceding pupil) answered to the declensions and conjugations of the Greek Language, and declined and conjugated several regular nouns and verbs proposed to her. This pupil had never seen a Greek character till put under the care of the Professor.

The whole instruction received by the above pupils consisted of five lessons only, of one hour each.

Master S. H. explained the physical, mathematical, and chemical characters of minerals, after Hauy's system, assigning the systematical order of any character whatever proposed to him, and showing in what manner any mineral ought to be examined and tried, to ascertain its nature. This pupil received only two hours' instruction from M. Feinaigle.

Master S. H. afterwards requested the audience to give twenty words or names, without any order or connection whatever. These words were written on a board, and numbered from one to twenty, as follows:—

1. Tower.	11. Crotch.
2. Gate.	12. Grey.
3. Steeple.	13. Regent.
4. Church.	14. Feinaigle.
5. Chapel.	15. Syracuse.
6. Institution.	16. Wellington.
7. Graham.	17. Archimedes.
8. Ten.	18. Palestine.
9. Hill.	19. Button.
10. Nelson.	20. Reform.

After inspecting the numbers and words for a space of time, not exceeding *three* minutes, the pupil named every word in the series, both forward and backwards; to any number that was proposed to him, he assigned the proper word, and *vice versa*.

A series of 27 figures, named promiscuously by the audience, was then written down, as, 8, 5, 1, 0, 5, 0, 2, 9, 6, &c. &c. &c. These the pupil surveyed attentively, for about five minutes, and then repeated them forwards and

backwards. He afterwards declared how many 8's, 2's, 9's, &c. occurred in the series, and the relative situation of each figure.

In consequence of the disappointment of many of the Proprietors and Subscribers, who could not obtain admittance into the Lecture Room on the 6th instant, the above experiments were repeated on Wednesday evening last to a crowded auditory. *On this evening* the following additional evidences of the utility and universality of M. Feinaigle's System were adduced.

Master J. C. answered to two sums in *multiplication* of 8 numbers, by 8 numbers each. Each sum containing 8 separate products, besides the *total* product; he repeated any product required of him. The separate operations being represented on a board, by cyphers—on any one cypher, or line of cyphers, on either sum being effaced, he represented them by the appropriate figures. This pupil was employed for *ten minutes* only, in committing the figures to memory.

Miss S. T. answered to the Chronology of the kings of England, from William the Conqueror, down to his present Majesty, in any order that was desired. She also named the predecessor and successor of any king pointed out to her. This pupil received four lessons or one hour each.

Master S. H. after one hour's application, repeated a Greek word from Aristophanes, consisting of seventy-six syllables, and 165 letters, both forwards and backwards; he also named any syllable in any order desired, determining its numerical situation.

At these public experiments, M. Von Feinaigle distributed a *syllabus*, in which the nature of the pupil's examination was stated; and the six following notes, or explanations, of the objects of his "New System of Mnemonics and Methodics," were subjoined:

"1. *Systematic Tables.* A method that is at once speedy and effectual for acquiring the perfect knowledge of systematic tables, is an object of higher value and greater importance than at first it might appear. How often

are we attending courses of lectures upon particular sciences, without being able to form a clear idea of the whole, or to give ourselves an account of what we are learning! When, by the means here recommended, we are enabled to know previously the great divisions and subdivisions of a system, it is not difficult to refer to those fixed points all our ideas, and at once to secure our knowledge already attained, and to accelerate our progress in the science. A system acquired by this method, is not a dry and sterile series of words; it is a well-arranged classification of real knowledge. We learn in like manner all the systems of any science whatever, however complicated they may appear.

"2. *Languages.* The learning and teaching of languages are not only facilitated by the system of Mnemonics, but acquire more light and more solidity than ever they were thought susceptible of. It is a fact well known to all my pupils, that, almost in any language whatever, the declensions may be learnt in a single hour, and all the conjugations in another. It can easily be conceived, that all the rest may be acquired with the same facility; but this is not all the advantage of my system: anomalies, irregularities of verbs, and similar difficulties which have been hitherto the torment of the scholars, become, by this system, the most pleasing and most instructive part of the language. My pupils are convinced, by the most satisfactory experience, that grammar is to be learned in the language, not the language in the grammar; and when the true way is once known, it becomes delightful to them to go on with ease and promptitude, by themselves, from one language to another.

"3. *Prose and Poetry.* When we know pieces of prose or of poetry in such perfection that we are able to answer at pleasure to any single word, it is not to be imagined that in learning them we have to fix one word after another; but whatever we commit to our memory is there in such an order that we are sure to find it again whenever we may wish for it. The matter and the diction are necessarily distinguished, and every thing treated after its

own nature; and we are therefore sure neither to omit any thing that is to be said, nor any word by which it is to be expressed. Persons who could never before get by heart either prose or poetry, have, by a short practice of this method, acquired the greatest readiness and facility.

"4. *Geography.* This part of geography* has only been learned by my common manner of fixing in the memory proper names in general, and that of noting the arithmetical figures wherever we meet them. The true system of geography is the object of more than one of my lectures; and by this new system the study acquires a degree of facility, and the science itself a degree of perfection, of which it was never thought susceptible, and yet without which it can never be essentially what it ought to be. Those who would think it needless or of no use to know the situation of every remarkable point of the globe by degrees of longitude and latitude, have to consider, if without these degrees, geography itself, or any geographical chart, could ever exist; and if not, they surely cannot maintain that what is essential to geography itself may be neglected in the study of geography. This perfection is not only given to the science by my system, but is also attained with greater facility and certainty than even the former imperfect knowledge could be acquired by any other method whatever. The same principles are applicable with equal efficacy to all the subsidiary parts of a perfect geographical knowledge, and it is shown how to fix in the memory, for instance, the government, the extent, the population, and the military power, the products, the commerce, the manufactures, the arts and sciences, &c. of every state. Those who are acquainted with the principles of the present arrangement, cannot but feel how much easier it must be to compare, according to this plan, one kingdom with another by simple memory, than after any other plan, with all the asistance of books and systematic tables.

"5. *Chronology.* What is done with regard to the kings of England may be done with any chronological series of

* This refers to the longitude and latitude of the fifty cities repeated by the pupil.

sovereigns; and though such a series presented nothing more than what may be considered as great epochs of history, even of those the present system offers a greater number than any other system of chronology, and fixes them more easily than it has ever been possible to do by all those ingenious historical tables which have been invented to assist the memory in this interesting study. But the highest perfection of historical knowledge is certainly to know the whole history, not only by great epochs, but year by year, and fact by fact: and this perfection no other system has ever been able to afford.

"6 *Multiplication.* To make a multiplication, consisting of a greater number of figures in the multiplier as well as in the multiplicand, only by memory, without writing any thing, may certainly in many cases be desirable, or of great utility, and is, at least, a certain proof that the principles of the present method reach everywhere, and that to its means nothing is too difficult or too complicated. It is undoubtedly of the highest importance to be able to fix in our minds the numbers in general. Statistic geography, history, mathematics, in short, almost every science, is full of numerical figures. Multiplication tables, square and cube numbers, logarithms, algebraic formulæ, and all the mathematics can be submitted to those rules."

Having thus taken a slight survey of the principal systems of *artificial* memory, and exhibited a sketch of the rise and progress of the Mnemonic art, from the earliest period to the present time, we shall now proceed to the consideration of the *New Art of Memory* as taught by M. Von Feinaigle in his lectures.

CHAPTER II.

PRINCIPLES OF THE ART.

THE memory may be compared to a warehouse stored with merchandize. A methodical arrangement of the contents of such a repository, enables its owner to find any article that he may require with the utmost readiness. With a general knowledge of the contents of a library, and of the manner in which the books are distributed, a person may, even when absent from the spot, determine with certainty the situation of any particular book. "Medalists," says Mr. Addison, "upon the first naming of an emperor, will immediately tell you his age, family, and life. To remember where he enters in the succession, they only consider in what part of the cabinet he lies; and, by running over in their thoughts such a particular drawer, will give you an account of all the remarkable parts of his reign." If our ideas were arranged with equal method and order, the mind would turn to them with the like facility.

Sensible objects have a powerful effect in recalling to the mind the ideas with which it was occupied when those ideas were presented. Thus the sight of any remarkable scenes in the course of a second journey, will frequently remind a person of the subject of which he was thinking or talking when he last travelled that road; or, to adopt the elegant language of Mr. Foster, "Places and things which have an association with any of the events or feelings of past life, will greatly assist the recollection of them. A man of strong associations finds memoirs of himself already written on the places where he has conversed with happiness or misery. If an old man wished to animate for a moment the languid and faded ideas which he retains of his youth, he might walk with his crutch across the green where he once played with companions who are now probably laid to repose in another spot not far off. Ar-

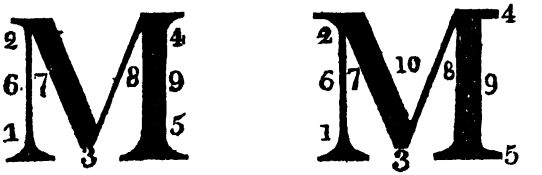
aged saint may meet again some of the effects of his early piety in the place where he first thought it happy to pray. A walk in a meadow, the sight of a bank of flowers, perhaps even of some one flower, a landscape with the tints of autumn, the descent into a valley, the brow of a mountain, the house where a friend has been met, or has resided, or has died, have often produced a much more lively recollection of our past feelings, and of the objects and events which caused them, than the most perfect description could have done."

Indeed, it will be found upon investigation, that *locality* is the most efficacious medium of reminiscence: and that system of memory will be the most serviceable, which brings this principle into the most extensive operation. For this reason, *locality* (or the connection of our ideas with places) is made the foundation of the present system. In this respect it is analogous to the scheme of Mnemonics practised by the ancients, but it is here applied much more extensively and advantageously than it was by them.

A room having generally four walls, the most obvious division of it is into four sides, and each wall or side may be subdivided into pannels or compartments. Accordingly, the ancient system divided a wall into five spaces. Thus, suppose the letter M to be represented on a wall, as under:

Five spaces are thus gained in the places marked by the figures 1, 2, etc. Every wall of the room was, in imagination, divided in this manner; and this plan was applied to as many rooms as were found necessary to the extent of each particular scheme—every room being similarly divided into four sides—and every side being subdivided into five compartments. Thus, any idea, which, according to this method, had been associated in the mind

with the forty-eighth compartment, would be placed in the third compartment of the second wall, in the third room. But as few compartments could be obtained on each wall by these means, the calculation of high numbers would be exceedingly difficult. To remedy this defect, each wall might be divided into nine or ten compartments, thus:



If a wall be divided into nine parts, there will be thirty-six compartments in every room. In order to ascertain the situation of any particular number, it is to be considered in relation to the total number of the subdivisions. For example, if the situation of number 48 be required; according to the last-mentioned division of the rooms, it is to be found by considering the proportion which that number bears to 36, the total number of the compartments in this arrangement. If the number in question be less than this total, the place inquired after will be obvious; thus 12 being within the number 36, must of necessity, be in the first room: being above 9, it is equally clear that it cannot be on the first wall; and being less than 18, it must, necessarily, be on some part of the second wall: and as it exceeds the number of the first wall by 3, it follows, of course, that its place must be in the third compartment of the second wall. If the number in question be higher than the number of the compartments in one room, its place will be readily found by dividing it by that number. Thus, suppose 48 to be the number whose place is required:

36)48(1. 2

9)12(1. 2

3

As 48 exceeds 36, we know that it cannot be in the first room; the 1 is therefore changed into 2; and the fraction remaining, shows it to be in the twelfth compartment. There being nine compartments on every wall, this remainder, or number of the compartment, is divided by 9, for the purpose of ascertaining the wall. Now, as the divisor is contained more than once, but not twice, in the dividend, it follows that the compartment sought must be on the second wall; the remainder gives the specific compartment. This operation, then, shows that 48 is in the third compartment on the second wall, in the second room. This was the plan adopted by the ancients when they divided their rooms into parts; but being both complicated and difficult, it has been rejected in the present system, and another scheme has been introduced in its place, which is more simple in its construction, less difficult in its application, and much more extensive in its powers.

We shall now proceed to explain the mode of dividing a room according to the *New System of Memory*, and to develop the principles of the art. It is, however, necessary to premise, that the pupil must not attempt too much at first, but should proceed gradually in the acquisition of this system; for his ultimate success in it will greatly depend upon a perfect knowledge of the first principles. As in mathematics no problem can be demonstrated without understanding all the preceding demonstrations,—so every advance in this art, must be grounded on the full possession of all the antecedent doctrines.

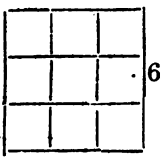
We shall divide a wall in the following manner:—

1	2	3
4	5	6
7	8	9

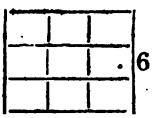
These figures are arranged from left to right, in the usual manner of writing; and for the more easily remembering their situation, it will be found that if two lines be drawn diagonally, from the four corners of the figure,

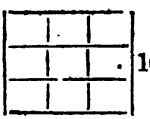
they will intersect all the odd numbers. (See Plate I. fig. 1.) There is now a single wall to divide into nine squares or compartments; these we shall name *places*, and say, the first place, second place, third place, etc. etc.

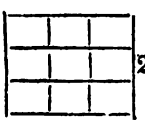
The same mode must be pursued with the three remaining walls in this room; by these means, four walls are obtained—each being divided into nine *places*. In order to find the number 36 in this room, we should naturally say four times nine will be 36, and should, of course, conclude that 36, would be the last place of the last side or fourth wall of the room: but this calculation is erroneous; 6 must ever be in the same situation, which will be that occupied by the point in the following figure:

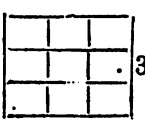


The place occupied by the number 6, in all the four walls, would be thus designated:







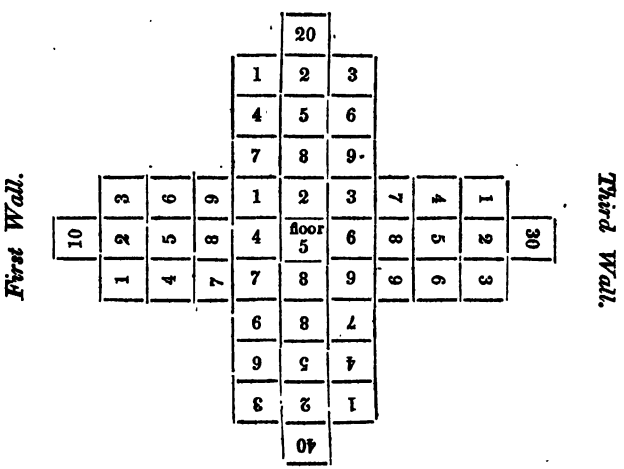


It must now be determined how we are to reckon these walls. If we stand with our back to the windows, the first wall is on our left, the second before us, the third on our right, and the fourth behind us. We shall, however, commence with the floor, and divide it into nine parts, in the same manner as the walls. Where are 10, 20, 30,

40, etc. to be placed? Every decade begins a new series, and the decimal is placed on the ceiling of the room over its proper wall; thus, the first decimal, or 10, will be over the first wall; the second decimal, or 20, will be over the second wall; the third decimal, or 30, will be over the third wall; the fourth decimal, or 40, will be over the fourth wall; the fifth decimal, or 50, as its tenth part exceeds the number of walls, will be assigned to the cieling of the room, and will consequently be the highest number in the first room, forming the connecting link between this room and the second.

FIRST ROOM.

Second Wall.



Fourth Wall.

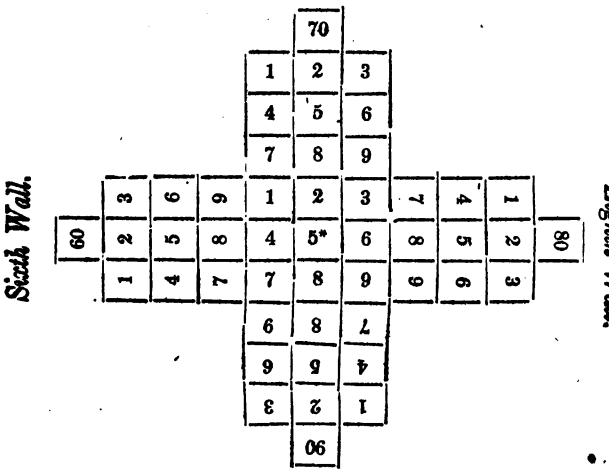
50 Cieling

As one room will not supply us with sufficient numbers, a second room must be provided. The floor of the second room is denominated the *fifth wall*, the wall on the left the sixth; the wall before us, the seventh; that on our right,

the eighth; and the one behind us, the ninth; and as the number 50 was upon the ceiling of the first, so the number 100 will be upon the ceiling of the second room.

SECOND ROOM.

Seventh Wall.



Ninth Wall.

100 Ceiling.

Numbers, probably, originated from holding up the fingers of the hand thus: | , | | , | | | , | | | |; five was made by holding up the thumb and little finger, with the other fingers down, thus $^{\text{thumb}}\text{V}^{\text{finger}}$ forming the numeral V; six was made by erecting another finger and continuing the former position; thus VI and VII, VIII and VIIII, in the same way, by adding a finger each time: ten was formed from two fives, thus, $\begin{matrix}\text{V}\\ \Lambda\end{matrix}$ making X.

The learner should now exercise himself in finding the situation of the different numbers in the two rooms.

* Floor or Fifth Wall.

substitution of letters for figures was practised by most ancient nations In the Hebrew and Greek languages, there are no arithmetical signs, but the letters of the alphabet are used in their place. Shop-keepers and others, from an early period, had been in the habit of marking the articles which they had to sell with certain letters, as arbitrary symbols, for the prices in pounds, shillings, and pence.

We now take the consonants, and attach one or more to the series of figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 0; each figure having its appropriate consonant. (See plate I. fig. 2.) The consonants only are resorted to, for they compose, like the skeleton of the human body, the principal parts; the vowels are but the ligaments.

The letters appropriated to the figures are not merely arbitrary, but are adapted as nearly as possible to the form of the figures.*

t, like the figure 1, is a perpendicular, or down stroke, and differs only from it in the addition of the small horizontal line drawn across the upper part of it; *t* is more like the figure 1 than any other consonant, if perhaps we except the letter *l*. An additional reason for assigning the letter *t* to 1 is, that it occurs in the word unit.

n, is the appropriate letter to represent 2; there are two down strokes in it.

m, furnishes us with three down strokes; it will then give the idea of 3; if we place a three thus ∞, it will afford a tolerable outline of the letter *m*.

r, is to represent 4: *r* when written, (See Plate I. fig. 2.) resembles somewhat a 4. The letter *r* occurs also in our word *four*; in the German *fohr*; in the Dutch *vier*; in the Latin *quatuor*; in the French *quatre*; in the Spanish and Portuguese *quatro*; in the Italian *quattro*; in the

* Dr. Grey, who assigned both vowels and consonants to figures, in a manner perfectly arbitrary, has the following scale:

a	*e*	*i*	*o*	*u*	*au*	*oi*	*ei*	*ou*	*y*
1	2	3	4	5	6	7	8	9	0
b	*d*	*t*	*f*	*l*	*s*	*p*	*k*	*n*	*x*

Here *a* and *b* stand for 1, *e* and *d* for 2, *i* and *t* for 3, etc.

Greek τεσσαρες in the Russ *chetyire;* and in a variety of other languages.

The English L was borrowed from the Romans; they had it from the Greeks, and they again from the Hebrews, whose *lamed* is much like our L, excepting that the angle is somewhat more acute. L was used as a numeral letter for *fifty*, and may therefore be assigned to the figure 5. *d*, in writing is the reversed form of this figure. (See Plate I. fig. 2.)

c, k, g, q. The figure 7, with a slight curvature, may be made to resemble a crooked stick, and as we shall remember this stick the better, if something be hung upon it, a *cage* shall be suspended there. In the word *cage* we obtain the consonants *c* and *g; k* also is added to the number, for *c* is more frequently pronounced hard (*ka*) than it is soft (*se*); *q*, being a gutteral and a *crooked* letter, shall go along with the cage and the stick. For the figure 7 there are then *c, k, g,* and *q.*

b, h, v, w. In the figure 8 there are two noughts, or two round things; these may be converted into *beehives*, and if one be placed upon the other, there will be a tolerably accurate idea of the figure 8. In the word, *beehive* are obtained *b, h, v;* and *w* may be added, for it is compounded of *vv*,

p, f. The figure 9 is not unlike a *pipe*, and as a pipe is seldom used without a *puff* of smoke issuing from it, we have the *p* and *f* in these two words; they are inseparably connected, and cannot easily be forgotten.

s, x, z. The o being a round body, it may be compared to a wheel or grinder in a mill; this wheel, when in swift rotation, gives out a hissing sound, and the hisssing consonants *s, x, z,* are attached to the cipher. *x* is formed from two half *circles;* and *z* is the first letter of the word *zero.*

These letters and the figures which they are intended to represent, should be impressed strongly upon the memory, as the letters must be converted into words by the introduction of vowels.

8 1 *b t*	3 0 *m s*	7 9 *c p*	2 6 *n d*
3 1 *m t*	4 5 *r l*	1 8 *t b*	0 9 *s p*
6 5 *d l*	7 8 *c b*	9 6 *p d*	4 3 *r m*

The two consonants representing two figures must be converted into a word, to which should be affixed some striking idea; and the images represented, connected together. The objects, when selected, each being a word, must be arranged in the different *places*, beginning with the floor, and proceeding to the first, second, and third walls, etc. In making these words, it is necessary that the two consonants required should be the two *first* in the word; if there be more than two, it is of no importance, as the two first only will be needful. It will not be difficult to make a perfect figure from the skeleton we have just seen.

Floor of the First Room.

BaT	MouSe	CaP
NeeDle	MuTton	RoLl
TuB	SoaP	DoLl

First Wall of the First Room.

CaBbage	PuDding	BuM

A *bat* is seen flying after a *mouse*, which shelters itself under a *cap*, stuck full of *needles*. There is some *mutton* for dinner, and a *roll* to eat with it. The *tub* and *soap* show that it is washing-day; the servants playing with the children and their *doll*, have forgotten to boil the *cabbage* and the *pudding*. As a compensation for this loss, a large bottle of *rum* is produced. By this method, it will be easy to commit to memory a long series of figures, to repeat them backwards or forwards, to name the first, fourth, fifth, eighth, etc., or to say how many fours, fives, noughts, etc., are contained in the series.

The converting of figures into letters, and making *sense* by the introduction of vowels, will be found applicable to many of the purposes of common life If we purchase any articles, and would remember the measure or weight of them, and thus prevent fraud in the shop-keeper, it is only necessary to change the figures into a word or words, and connect them with some strange or ludicrous idea. Should we buy 32 yards of cloth, muslin, etc., it is easy to say, that a *man* brought home the cloth, and the measure is given to us: if 30lbs. of cheese, a *mouse* that had been gnawing the cheese, would fix the weight immediately. The number of a hackney-coach, or of a house, may be preserved in the same manner The purposes in domestic life, to which this system is applicable, are almost infinite, and need no further specification.

We have already learned to divide a room into parts, as the floor and walls,—to subdivide these into *places*,—to change figures into letters,—and to form words; and, by these means, to remember series of figures or of things. It would be a material advantage to us, to have some fixed or certain rooms: we may take, for instance, those with which we are best acquainted, and fix the different *places* upon the various articles of furniture, as a chair, a chest of drawers, etc. What we have learned, hitherto, is not sufficient: as yet, an intellectual order only has been obtained; *numbers* have been localised, but there is still a deficiency—the *realities* are wanting.

If the reader has practised our instructions in a room in which he is accustomed to spend the greater part of his

time, and this room should have been hung with pictures, engravings, or plans, or ornamented with busts, etc., he will have been materially assisted in the remembrance of his *places*, or localities. We can, after a little practice, ascertain the order of different things placed in a room which we have long frequented. The transition is slight, but the impression will be permanent. Let us fill the squares or places with some pictures of our own drawing: the two rooms will be then furnished, and it will be as easy to remember the symbols, or hieroglyphics, as to remember the situation or place of any picture, or article of furniture in a room. Instead of having a carpet on the floor, we can suppose that the floor is inlaid or constructed of mosaic. This will allow us to put symbols there.

The outlines of the symbols are intended to represent, as accurately as possible, the various figures in the two rooms, so that they may be permanently fixed in the memory. The pupil can himself draw, or cause to be drawn, the symbols mentioned below, (rooms, 1st and 2nd,) and these drawings must be arranged according to the numbers in the squares on pp. 250 & 251.

And here we dismiss the pupil for a season, giving a gentle hint, that it will be advisable to make himself perfectly familiar with the situations of the different symbols, before he thinks of looking into the next chapter. Until a knowledge of these symbols be obtained, no further progress can be made in the system. It is, at least, indispensably necessary, that the pupil should answer with facility to any questions put to him respecting the *first* room, containing fifty symbols; the second room may be acquired at leisure.

The following are the names attached to the different symbols:

FIRST ROOM.

1 Tower of Babel,
2 Swan.
3 Mountain, or Parnassus.
4 Looking-glass.
5 Throne.
6 Horn of Plenty.
7 Glass-blower.
8 Midas.
9 Flower, or Narcissus.
10 Goliath, or Mars.
11 Pillars of Hercules.
12 David with the Lion,
13 Castle, or Nelson's Monument.
14 Diogenes, or Watchman.
15 Æsculapius, or Serpent.
16 Ceres, or Gleaner.
17 Archimedes, or Carpenter.
18 Apollo.
19 Robinson Crusoe.
20 Peacock.
21 Vaulter, or Rider.
22 Cock-fighting.
23 Pegasus.
24 Elephant.
25 Sancho Panza.
26 Charioteer.
27 Don Quixote.
28 Pack-horse.
29 Standard-bearer.
30 Sysiphus.
31 Cupid.
32 Diana.
33 Clouds, or Sky
34 Noah's Ark.
35 Curtius.
36 Hermitage.
37 Miner.
38 Moses.
39 Vesuvius.
40 Pleasure Garden.
41 Monument
42 Golden Calf.
43 State Bed.
44 Piano-forte.
45 Bajazet.
46 Fountain, or Square.
47 Vulcan.
48 Apis.
49 Orange-Tree.
50 Bacchus.

SECOND ROOM.

51 Pygmalion.
52 Jupiter.
53 Neptune.
54 Toilet, or Penelope.
55 Fleet.
56 Guitar Player.
57 Conjurer.
58 Orpheus.
59 Sampson.
60 Still.
61 Bagpipes.
62 Phœnix.
63 Temple of Glory.
64 Fame.
65 Schoolmaster.
66 Tents.
67 Mutius Scœvola.
68 Mercury.
69 Mausoleum.
70 Lottery, or Fortune
71 Saturn.
72 Centaur.
73 Pedlar.
74 Thresher.
75 Garden Engine.
76 Gardener.
77 Mowers.
78 Pagan Priest.
79 Direction Post.
80 Apothecary.
81 Cymbal-Player.
82 Trojan Horse.
83 Actæon.
84 Cabriolet.
85 Europa.
86 Brewer.
87 Hunter.
88 Bull-fighting.
89 Hercules.
90 Burning-Glass.
91 Tantalus.
92 Hawker, or Sportsman.
93 Golden Fleece.
94 Lime-Tree.
95 Shepherd.
96 Cap of Liberty.
97 Solomon.
98 Trophy.
99 Avenue.
100 Justice.

CHAPTER III.

APPLICATION TO CHRONOLOGY.

THE pupil is, by this time, supposed to have fixed all the symbols in the first room, and to be enabled to tell readily the first, seventh, thirtieth, forty-ninth, etc., and also to say what place is occupied by Midas, Sisiphus, etc. In making the *application* to chronology, we shall confine ourselves to the succession of the kings of ENGLAND since the conquest.

1. WILLIAM THE CONQUEROR. A word must now be made from William; the first half *wil* is taken, and to this is added *low*, by which *willow* is obtained; this enables us to remember *William*. The willow is fixed upon the *Tower of Babel*, our first symbol; we have then *William I.;* but another circumstance remains; he was the *conqueror:*—we hang some *laurel*, the reward of valour and the crown of conquest, upon the willow tree. The *date* is yet wanting; we say the laurel is dead; in the word *dead*, are *d d*, for 66; the 1000 being understood, through the whole series.*

2. WILLIAM RUFUS, or WILLIAM II. There must be *two willows*, one on each side of the *swan;* the swan is put into a red (*bag*): by making the bag *red*, we preserve the meaning of the Latin word Rufus.

3. HENRY I. There is *one hen* upon the *mountain*, tossing up the ground; (*toss*).

4. STEPHEN. The *looking-glass* is very much *stiffened;* there is a watch placed before the glass; this is (*timely*). The word *stiffened* will recal to the mind the name of *Stephen*.

5. HENRY II. A (*taylor*) sitting upon the *throne*, with *two hens*, one under each arm.

* As the reader will find at p. 40, a tabular view of this application, we shall merely explain the manner of connecting the different images, in closing the word which gives the date in a parenthesis.

6. RICHARD I. This was the *first rich* man,—the *horn* of *plenty* is before him. The first rich man, probably, pilfered from other people; he must have been a (*thief*).

7. JOHN. The *glass-blower's* name was John (*Taffy*).

8. HENRY III. *Midas*, or the man with the long ears, has just received a present of *three hens;* he puts one in each ear, and one in his mouth; the hens are so near each other, they are almost (*united*).

9. EDWARD I. To fix the name of Edward, we convert the verb *to ward*, that is, to watch, into a substantive, and say, here is one *ward*, guard, or soldier, watering *Narcissus*, or the flower, with an (*engine*).

10. EDWARD II. There are *two* wards, or guards, behind *Goliath*, each in a (*mask*).

11. EDWARD III. Three soldiers as guards, between the *Pillars of Hercules*, playing with a (*monkey*).

12. RICHARD II. This is the second rich man, who meets *David putting his hand into the lion's mouth;* David is mocking at the lion's strength—(*mock*).

13. HENRY IV. We take a (*muff*), put *four hens* in it, and place it on the *pyramid.*

14. HENRY V. *Diogenes* has *five hens* in his lantern; they are very noisy and troublesome,—(*rout'em*).

15. HENRY VI. *Æsculapius*, or the doctor, is very much annoyed by *six hens*, which are (*running*) round the serpent.

16. EDWARD IV. Here are *four* soldiers taking away poor *Ceres*, and putting her in a (*redoubt*).*

17. EDWARD V. *Archimedes*, or the carpenter.

18. RICHARD III. *Apollo.*

As these two kings are of the same date, one word will be sufficient to fix it. Here are *five guards* preparing to rob the *third rich* man; *Apollo* is looking on, and amusing them with a tune on his lyre; in the mean while, *Archimedes*, or the carpenter, vociferates (*rob'em*).

19. HENRY VII. *Robinson Crusoe* is seen to shoot *seven hens*, in a (*rebellion*).

20. HENRY VIII. There is a *Peacock*, with *eight hens*

* As the *b* is not sounded in pronunciation, the *r*, *d*, *t*, are the letters which give the date.

in her nest; they are young and cannot speak,—they are (*lisping*).

21. EDWARD VI. We have here the *vaulter* or rider; one man is a sufficient weight for a horse; but our horse must carry seven. There are *six guards*, or wards, upon this horse, besides the vaulter, who are all scrambling for a piece of a (*lark*).

22. MARY. There must be some rejoicings where there is a *cock-fight*; it is very possible that the town may be (*illuminated*).

23. ELIZABETH. This queen had so flourishing a reign, that she is (*allowed*) to ride upon *Pegasus*.

24. JAMES I. The word *chains* sounds somewhat like *James*; we will, therefore, put the *Elephant* in chains: what (*dismal*) chains.

25. CHARLES I. Poor *Sancho Panza* upon his ass! Poor fellow, he met with many (*denials*).

26. CHARLES II. The *charioteer* is running a race; the (*odds*) are against him.

27. JAMES II. *Don Quixote* must be put in *chains*; he must have two sets of chains; he shall have (*double*) chains.

28. WILLIAM III. The patient *pack-horse*, travelling along the accustomed road, arrives at that part where the *three willows* have been planted: how melancholy it is to see so many willows! (*do weep*).

29. ANNE. The *Standard Bearer* is just arrived on a visit to (*cousin*) Anne.

30. GEORGE I. *Sysiphus* is rolling up the hill "his huge round stone,"—but he stops and listens to some one who is playing on the (*guitar*).*

GEORGE II. This sovereign is a (*king*) between two kings of the same name.

GEORGE III. has had some important concerns with *Cadiz*

TABULAR VIEW OF THE CHRONOLOGY OF THE KINGS OF ENGLAND FROM THE CONQUEST.

Numerical order.	Name of the King.	Symbol.	Word giving the date.	Date.
1	WILLIAM THE CONQUEROR,	Tower of Babel,	DeaD,	1066
2	WILLIAM II. (Rufus.)	Swan,	BaG,	1087
3	HENRY I.	Parnassus,	ToSS,	1100
4	STEPHEN.	Looking-Glass,	TiMeLy,	1135
5	HENRY II.	Throne,	TayLoR,	1154
6	RICHARD I.	Horn of Plenty,	THieF,	1189
7	JOHN,	Glass-Blower,	TaFFy,	1199
8	HENRY III.	Midas,	uNiTeD,	1216
9	EDWARD I.	Narcissus, or, the Flower,	eNGiNe,	1272
10	EDWARD II.	Goliath,	MaSK,	1307
11	EDWARD III.	Pillars of Hercules,	MoNKey,	1327

TABULAR VIEW OF THE CHRONOLOGY OF THE KINGS OF ENGLAND FROM THE CONQUEST.

Numerical order.	Name of the King.	Symbol.	Word giving the date.	Date.
12	RICHARD II.	David & the Lion,	MoCK,	1377
13	HENRY IV.	Pyramid,	MuFF,	1399
14	HENRY V.	Diogenes,	RouT'eM,	1413
15	HENRY VI.	Æsculapius,	RuNNing,	1422
16	EDWARD IV.	Ceres,	ReDoubT,	1461
17	EDWARD V.	Archimedes,	rOB'em,	1483
18	RICHARD III.	Apollo,		1483
19	HENRY VII.	Robinson Crusoe,	ReBeLlion,	1485
20	HENRY VIII.	Peacock,	LiSPing,	1509
21	EDWARD VI.	The Vaulter,	LaRK,	1547
22	MARY,	Cock-fighting,	iLLuMinated,	553

TABULAR VIEW OF THE CHRONOLOGY OF THE KINGS OF ENGLAND FROM THE CONQUEST.

Numerical order.	Name of the King.	Symbol.	Word giving the date.	Date.
23	ELIZABETH,	Pegasus,	aLLoWed,	1558
24	JAMES I.	Elephant,	DiSMal,	1603
25	CHARLES I.	Sancho Panza,	DaNieL,	1625
26	CHARLES II.	Charioteer,	oDDS,	1660
27	JAMES II.	Don Quixotte,	DouBLe,	1685
28	WILLIAM III.	Pack-horse,	Do WeeP,	1689
29	ANNE	Standard Bearer,	CouSiN	1702
30	GEORGE I.		GuiTaR,	1714
	GEORGE II.	Sysiphus,	KiNG,	1727
	GEORGE III		CaDIZ,	1760

CHAPTER IV.

APPLICATION TO GEOGRAPHY.

In the application of the Art of Memory to Geography, this science will be considered under the the following heads: (1.) Principles. (2.) General Geography. (3.) Particular Geography. (4.) Statistics.

Sect. 1.—*Principles.*

Geographical charts represent the situation of cities, towns, seas, continents, etc., on the globe; but we will suppose that nothing of this kind has ever been fabricated; that there are no charts: if we wish to ascertain the relative situation of any places, the means must be invented to accomplish what is required, beginning with the first principles. Whenever the memory is to be treated with, we should employ the powers of reason. The charts must be drawn in our intellect, and we should proceed step by step; what is wanting in the memory will be supplied by reason.

The earth being a round body,* it is represented by a globe; but as both sides of this globe cannot be seen at the same time, it must be divided into hemispheres or halves: there will then be an eastern and a western, or a northern and a southern hemisphere.

Suppose a circle to be described, and a point placed within it; the situation of this point must be determined with relation to some other parts of the circle. If a horizontal line be drawn across the circle and divide it equally, the line appears to be straight, but cannot, in reality, be so, because it is half the circumference of a globe. A perpendicular line is then drawn, and the hemisphere is divided into four equal quarters; each quarter containing 90° or one-fourth of 360°; every circle containing 360°. (See

* The earth is, as every one knows, an oblate spheroid, but it would be needless to descend to particulars, in a general illustration.

plate I, fig. 3.) The horizontal line must be taken for the *equator*. The quarter, then, in which the dot or point appears, should be divided by 90 lines; but as this would completely conceal the surface of the diagram, and obliterate the little point itself, we will divide it into 9 parts. (See plate I. fig. 4.)

The point is now evidently within the first stripe or line, and if these lines be named *ladders*, we shall say it is on the ladder; but its situation is now only half determined. These ladders are divided into *steps;* and each has 9 steps. This will be effected by drawing 8 horizontal lines across those already made. (See plate I. fig. 5.) The point is still on the first ladder, but on what *step?* It is on the sixth *step*.

Two rooms should be provided, with four walls in each; in the upper room is to be placed the northern hemisphere, and the southern is to be supposed under the northern, in the lower room. We will begin with the northern hemisphere, dividing it into four equal parts or quarters; transferring one quarter to the first wall. (See plate I. fig. 6.)

The former division of a wall was thus:

1	2	3
4	5	6
7	8	9

It will not, however, be more difficult to remember nine figures in one line than in three. The floor of the upper room in which we stand, is the equator; upon this we reckon the longitude. From the pole to the equator there are 90°, but we only place 60° on the wall, the remaining 30° being fixed on the ceiling. In each of these squares, there are 10° of longitude and 10° of latitude.

The horizontal lines are parallels of *latitude*, and the perpendicular lines are meridians or circles of *longitude*.

The series of walls in the first room will be as follows:

I.	1	2	3	4	5	6	7	8	9
II.	10	11	12	13	14	15	16	17	18
III.	19	20	21	22	23	24	25	26	27
IV.	28	29	30	31	32	33	34	35	36

Upon referring to the globe, it will be found that the whole hemisphere, north of the equator, has been transferred into the first or upper room; the southern hemisphere being reserved for the room beneath.

Before we proceed further, the *meridian* must be fixed. This, in English charts, is taken from London, or more correctly from Greenwich, counting the longitude east and west from that place. The French place their meridian in Paris, but they mark also in their maps the longitude from Ferro, from which island all the other European nations commence theirs; by these means, the longitude which is laid down on a foreign map is comprehensible by them, and the Parisian mode is easily understood by any other continental geographer, but our maps are not intelligible anywhere but in England.

In making our calculation we shall adopt the meridian of Ferro, because it divides the globe into those two equal parts or hemispheres, which are usually represented on maps. Suppose a place to be in 254° of longitude, and 43° of latitude; on what ladder, on what step, and on what wall will it occur? We must take 254, (and as it will be remembered our hemisphere is divided only into tens of degrees) we must cut off the unit figure, thus 25,4, and we have 25 left; but as the 25th ladder would include only those degrees under 250, and 254 being above that number, it is on the 26th ladder. To ascertain on what wall this 26th ladder is, and its numerical situation there, the figures 2 and 6 must be added together; the product gives the number of the ladder. By counting the differerence between 6 and 8, thus 6, 7, 8, *three*, the number of the wall is given. In the latitude 43, the 3 is

David, in tearing the *sinews* of the lion, is *gored* by the animal; and that he has a *green cap* in his hand, these three places will be fixed in this square. It is quite sufficient, if the words given recall the names of the places to our memory.

On the *third* step are the Canary Islands; these are somewhat like a cluster of birds, (Canary birds,) that must fly round the *Pyramid*, the symbol for 1, 3, (1st ladder, 3d step).

On the *fourth* step, there is part of Portugal, and the island of Madeira. The symbol for 14, is *Diogenes* with the lantern. This man is the proprietor of the island, and has come to Madeira from Lisbon, on purpose to drink a bottle of his favourite beverage.

On the *fifth* step is Cape *Finisterre*. The symbol for 15 is Æsculapius with his serpent; a serpent then shall be placed at the extremity of the land, (*Finis terræ*).

On the *sixth* step there is a small part of Ireland. The symbol for 16 is *Ceres*, or the gleaner; she shall have a *garland* upon her head; *gar-land* and Ire-land are too much alike in sound to be easily forgotten.

On the *seventh* step is *Iceland*. The symbol for 17 is *Archimedes*, or the carpenter; he is breaking up the ice, and that we may remember the name of the celebrated mountain, Hecla, we will say, that he acquits himself with very great *eclat*.

These illustrations seem amply sufficient to direct the pupil in the application of this art to geography, so far as it relates to the use of the symbols, and the connecting ideas to be associated with them.

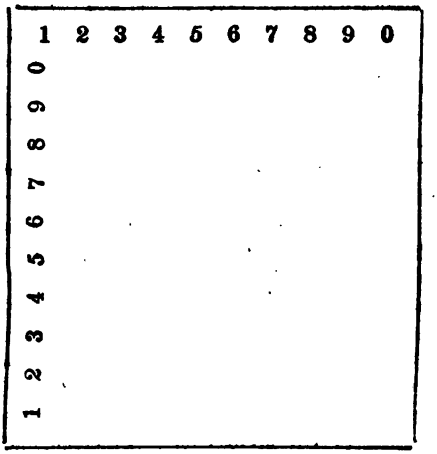
While we count our meridians all east from Ferro, it must be remembered, that in English maps, London, or rather *Greenwich*, is taken for the first meridian, from which the degrees are counted 180° East, and 180° West. If a place be described in longitude, 121° west of London; to reduce it to the meridian from Ferro, 121° must be subtracted from 180°, (the whole number of degrees west,) the remainder is 59, which, added to 180, and the 18° difference between the calculation from London and Ferro, will give the product 257°. A place, then, which is 121°

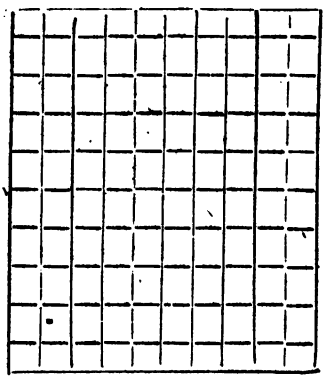
west of London, may be said to be 257° east of Ferro. The meridian of *Paris* is 20° east from Ferro, and 2 from the meridian of London. This process is at once simple and correct, and will allow us to use a general meridian which will be intelligible on all maps and to all persons.

The best mode of learning the geography is to take a chart of Mercator's projection of the earth, in which the degrees of latitude and longitude are marked by *tens*, that it may coincide with the divisions on the walls, each of the squares there containing 100°; 10° both ways. All the squares in the map must be covered with a sheet of paper, except one, that is the first step on the first ladder; the space taken up by the land in this square should be noticed, and the outline of the land described in the map, and traced upon a drawing or diagram of the first wall, divided into ladders and ladder-steps, as seen before. These squares should be sufficiently large to show some of the principal projections of the land, that the most remarkable places may be inserted; thus constructing a small chart.

In the *lower room*, which contains the southern hemisphere, we must count *downward*, 1, 2, 3, 4, 5, 6, 7, etc., still beginninning with the equator.

Every one of the small squares may be divided into degrees.





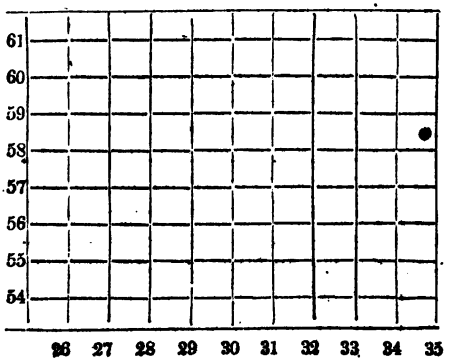
Suppose the point in this square to represent *Madeira.* This point is about one-fifth of the whole, therefore, it is in 2° of longitude, and a little less than one-fifth of the whole 10° of latitude, we see then 32° $\frac{1}{2}$ of latitude, and 2° of longitude; there is not an error of $\frac{1}{4}$ of a degree.

To ascertain the relative situation of towns, some association must be formed between the towns and cities found in any one square. If a sort of narrative be invented, the

memory will be materially assisted. We will take 25 for an example: in this are many towns, as Madrid, Barcelona, Bordeaux, Rochelle, Brest, Rouen, and Paris. The symbol for 25 is Sancho Panza. Sancho then must set out on his travels; he departs from *Madrid*, and arrives at *Barcelona*, where he has to call for some *parcels* (Barcelona); he then goes to Bordeaux, and is very fond of drinking a bumper of good *Bordeaux wine;* thence he travels to *Rochelle*, where he rests on a *rock:* being *pressed* for time at *Brest*, he departs for *Rouen;* and by *rowing* down the *Seine*, arrives at last at *Paris*. To remove the apparent difficulty of fixing the names of so many squares, it must be observed, that the greater proportion of them is occupied by sea, where, of course, there is nothing to fix. It may also be supposed, that as there are no less than eight *elevens*, there will be much confusion in remembering the name of any particular place. An association has already been formed for the *eleven* in the first wall. In the *eleven* in the second wall is *Ceylon:* it is not likely that we shall ever commit so great an error as to place Ceylon on our first wall, or Sierra Leone, or Goree, on the second. The *locality* of each is so permanently fixed as to defy any thing like confusion.

Sect. 3.—*Particular Geography.*

In *particular* charts the divisions are different from those in *general* charts; being divided into much smaller parts.



The above is a chart with a series of figures. The figures which run along the bottom of this chart are the degrees of longitude; those which run up the sides are the degrees of latitude. The latitude must be counted North or South of the Equator, and the longitude, East or West of the first meridian. There is here a series of ladders and steps, but very differently numbered from those which have been seen before. The square in longitude 29°, and latitude 55°, if brought together will make 2955; the tens must be rejected, and the units only left. We know that the squares in longitude, from 20 to 30, are on the third ladder, and from 30 to 40 on the fourth; and that the latitude begins on the sixth ladder step. To remember this, some word must be formed from the two figures. Having cut off the tens, we find 2955 becomes 9 longitude, and 5 latitude. The minutes are next to be determined. The distance from line to line is 60 minutes; $\frac{1}{2}$ will of course be 30 minutes; $\frac{1}{4}$—15, $\frac{3}{4}$—45, $\frac{1}{5}$—12, $\frac{1}{12}$—5. When the geography of *England* is to be learned, we should commence from the bottom or South of the map, as England is above the equator: when any country is beneath the equator, we must of course count downwards. Although the floor is not used in geography, it will be convenient to suppose this chart of England placed upon the floor, that the different counties may be arranged in order; or it may be supposed to be on a table, etc. or on any other object.

England is generally divided into circuits, each of which contains a certain number of counties.

Circuits in England and Wales.

	I	II	III	IV	V	VI	VII	VIII
COUNTIES. 1	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—
			—	—				
				—				
				—				

The usual division of the counties is into *Home Circuits*, etc. etc. but this will not be adopted here. The following is our arrangement of them.

I. *South East.* Sussex, Hertfordshire, Kent, Middlesex, Essex, Surrey.

II. *South West.* Hampshire, Wiltshire, Dorsetshire, Somersetshire, Devonshire, Cornwall.

III. *East.* Suffolk, Norfolk, Cambridgeshire, Bedfordshire, Huntingdonshire, Buckinghamshire.

IV. *West.* Berkshire, Oxfordshire, Gloucestershire, Worcestershire, Monmouthshire, Herefordshire, Shropshire.

V. *Midland.* Northamptonshire, Rutlandshire, Lincolnshire, Leicestershire, Nottinghamshire, Warwickshire, Derbyshire, Staffordshire, Cheshire.

VI. *North.* Yorkshire, Durham, Northumberland, Lancashire, Westmoreland, Cumberland.

VII. *North Wales.* Montgomeryshire, Denbighshire, Flintshire, Merionethshire, Caernarvonshire, Anglesea.

VIII. *South Wales.* Glamorganshire, Brecknockshire, Radnorshire, Caermarthenshire, Cardiganshire, Pembrokeshire.

All these circuits are numbered in a series as ladders, and the counties are the steps; therefore 4,4 will be 4th circuit, 4th county, and so of the rest.—The symbol for 44 is a piano-forte; if it be said that the keys of the instrument are bound with *worsted*, Worcestershire will be immediately brought to our recollection. In the same manner we must proceed with the others, fixing each on a symbol, and connecting some strange and ludicrous idea with this symbol.

The student should be prepared with a small map of England which is not coloured, and colour the *circuits*, each with a separate colour. The first, for instance, blue; the second, yellow; the third, green; the fourth, red; the fifth, lilac; and when he comes to the sixth, begin again. When this is done, it must be remembered that the numerical order of the circuits is represented by the different colours. The first colour will be blue, the second yellow.

When the counties are numbered, the pupil must count

upwards, commencing with the lowest. The more effectually to distinguish their numerical order, we use the colours. The first county in the first circuit must be bordered with blue; the second county with yellow; the third with green, etc; and the like with the other remaining counties in the circuit. The numerical order of the counties will thus be firmly impressed on the memory.

France contains one hundred and ten departments. These are to be divided into eleven *regions*, containing ten departments in each. The regions should be arranged in geographical order, commencing from the equator, and counting upwards. The meridian is taken from Paris. West of this meridian we commence with O, the regions of the Pyrenees. On the East is I the region of the Mediterranean, II of Piedmont, III of Charente, IV of Lake Leman, V Central region, VI Finisterre, VII region of Jurat, VIII of the Seine, IX of the Rhone, X northern region.

If we wish to know the thirty-fifth department, it will be found in the third region, fifth department. To distinguish the region there are five colours; one colour serves for I and VI, a second for II and VII, a third for III and VIII. In the same manner one department is distinguished from another.

Section 3.—*Statistics.*

It has been shown that by the aid of the first principles of this science, it will not be difficult to find the situation of kingdoms, provinces, etc. and their respective longitude and latitude. There are, however, many other particulars which it is important to remember, as the number of inhabitants, the natural products, the military power, the extent in square miles, the form of government, the state of commerce, of the arts, etc. These may be all fixed in the memory with equal facility. Suppose that there is before us, a table, and that all the kingdoms of Europe are placed upon it, and arranged according to their relative importance. This is shown in the following statistical table.

Statistical Table.

	I England.	II Spain.	III France.	IV Sweden.	V Denmark.	VI	VII	VIII	IX	X
Population										
Natural Prod.										
Milit'y Power										
Ex. in sq. M.										
Government										
State of Com.										
Arts & Manuf.										
Sciences										

The first symbol being the *Tower of Babel*, it must be connected, in some manner, with the kingdom, which is placed first. This is *England*. The Tower of Babel was the cause of the confusion of languages: in England are heard many different languages. Spain shall be II. The symbol for 2 is a Swan; a swan then is placed in the sea, between Spain and England, and it will swim to England to convey intelligence. III is France, and is represented by the mountain, or Parnassus; the Muses are banished from France. IV is Sweden, represented by a looking-glass, which may be emblematic of the smooth surface of the Baltic Sea, when calm and at rest. By such comparisons as these it will be easy to fix any thing that may be required. It now remains to mention the objects in the particular squares or places.

1. *Population.* The symbol for this square is the *Tower of Babel.* From the top of a tower, some idea may be formed of the population of a city, by the number of people walking in the streets.

2. *Natural products.* This square is represented by the swan. A swan is an animal. Animals may be reckoned among the natural products of a country.

3. *Military power.* A fortification may be supposed to be on a *mountain*; and, as this is the symbol for 3, the *military* power will immediately occur to us.

4. *Extent in square miles.* The looking-glass, which represents 4, will, by its four-square figure, call to mind the square miles.

5. *Government.* It will not be difficult to connect the idea of a *throne*, with that of government, whether it be monarchical, republican, or any other form of government. A *throne* is the symbol for 5.

6. *State of commerce.* Commerce, the source of plenty, may well be represented by the *Horn of Plenty*, the symbol for 6.

7. *Arts and Manufactures.* To remember these it will be only necessary to think of the *Glass-blower*, the symbol for 7.

8. *The Sciences.* The symbol for 8, *Midas*, or the man with long ears, is capacitated for the reception of all branches of science.

There is here again a series of ladders and ladder-steps, which must be denominated by their respective numbers. In the numbers 2, 4, there is 2 for Spain, and 4 for the extent in square miles, or the second ladder, fourth step: 4, 6 is the commerce of Sweden; fourth ladder, sixth step.

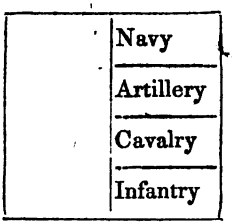
In the *statistical table* may be placed every particular that it is necessary to know respecting a nation. The manner of application for each square is now considered.

1. *Population.* This is changing every year; the thousands and hundreds must therefore be omitted, and the *millions* only preserved. The population for England will be the number 1, 1, first ladder, first step: this is represented by the pillars of Hercules. England contains 24 millions of inhabitants. This number will be fixed in the memory by changing the figures into a word; *t d* will be consonants giving the number;—it may be said, then, that there is a *toad* crawling up the pillars of Hercules.

2. *Natural Products.* If a country be remarkable for the excellence of its horses, a rude outline of this animal may be drawn in the square belonging to the natural products. If it contain extensive *salt* mines, a barrel or basket of salt may be placed by the horse; if good wine, two bottles of wine should be added; *iron* may be represented by *bars*, and sheep by an outline, as with the horse. To connect these circumstances together, some narrative should be invented, the more improbable and ludicrous the better. The *horse* being pressed by hunger, eats the *salt*, but becoming thirsty, in consequence, drinks the *wine;* the wine has an effect on him, he becomes frantic, breaks the bars of iron, and endangers the safety of the sheep. The symbol for 12 is *David with the lion;* David must hold the horse, and take especial care that the lion does not devour the sheep.

In the course of our reading, if it be required to commit to memory any remarkable circumstance respecting a country, we should take a sheet of paper and divide it as our table is divided, placing in the appropriate squares a resemblance, or rude outline, of the object or circumstance to be remembered. This mode will assist the memory very materially, and excite a greater degree of attention than the mere idea which is presented to the mind by reading

3. *Military Power.* The state of the military force, in time of peace as well as of war, must be considered, with the divisions into artillery, cavalry, and infantry; or, any other arrangement may be made which the nature of the military force, in any particular country, may demand. The square may be thus divided :—



4. *Extent in square miles.* Here we should divide the square into several parts, significant of the face of the country; whether it be cultivated or uncultivated, wood-land, meadow or pasture, arable, etc., and what may be the extent of water in the country.

5. *Government.* If the government be monarchical, a king may be supposed sitting upon the throne, attended by princes; or, if of the mixed kind, he is supported by Lords and Commons.

6. *Commerce.* In this are arranged the principal exports and imports, and whatever relates to trade in general.

7. *Arts and Manufactures.* Those of England might be represented in many ways. It will be sufficient, perhaps, to place there the *steam-engine* and the *cotton-mill*, and there will be a visible remembrance of the arts and manufactures of our own country.

8. *The Sciences.* To this square belong the principal universities or foundations for the propagation and increase of knowledge, with the various literary and scientific institutions, as also the philosophers, poets, etc. etc.

This general system of statistics is applicable, of course, to any particular country, and to its various subdivisions. In England, for instance, it might be applied to every *county*, in the same manner, as it is used for the whole *kingdom*.

CHAPTER V.

APPLICATION TO HISTORY.

THE pupil having acquired some knowledge of the details of geography, including statistical tables, and also of the mode of fixing in his memory the chronological succession of sovereigns, will proceed to the study of history with peculiar advantages.

The following arrangement of some dates will introduce us to the application of the mnemonical principles to history.

Room	Stripe	Place
17	8	6
15	2	4
14	6	0
12	0	7
9	7	4
	8	7
		9

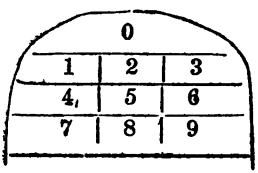
There are here units of years, tens of years, or decennials; and hundreds or centuries. As the division into rooms already noticed, will be here resorted to, we cut off the first series of units, and call them *places;* the next which are rejected are named *stripes;* and the remaining figures, *rooms.* For example, 1786, would be the seventeenth room, eighth stripe, and sixth place; 1524, fifteenth room, second stripe and fourth place, and so of the rest. 87 is in 0 room, or the room of units and tens,* eighth stripe and seventh place. When we view a choice collection of pictures, some impressions of the excellence of a particular picture, and of its situation in the room or gallery, are generally fixed in the mind. The remembrance of one picture will suggest the situation of another, and in this manner it will not be difficult to fix the places of the more conspicuous paintings: and, if there are many rooms, the particular room may be distinguished. Instead of a room being filled with pictures, it is easy to imagine that it is

* The second is the room of centuries.

occupied by the events of a whole century: in this room are all the years, reduced to *localities*.

A room is now taken with three walls, (see Plate I., fig 7,) each of which is divided into nine compartments or squares, as we have, in some instances, done on our walls.

Each of these stripes is now a ten; and before the first ten there is a stripe, which is placed on the floor: on this are put 1, 2, 3, etc. to 9. The number 100 must be placed on the ceiling of the *second* room, which should be divided in the same way. This number will also serve as an inscription to designate the room. As it will be needful to appropriate a room to each century, there will be occasion for a series of rooms. This series will be thus arranged.



Here are the hundreds; and those before hundreds are placed in the preceding or *O* room. There is now a necessity for a *tenth* room. To obviate this inconvenience it will be easy to suppose that the house is a *double house*. Thus we shall be furnished with rooms for 2000 years.

But whence, it will be asked, are so many rooms to be procured? Every one is familiar with the apartments in his own house. All these rooms must be employed, and named, first, seventh, fourth, etc., and it will be better to choose rooms which are supplied with pictures, furniture, or some other remarkable objects, upon which numbers may be fixed. Each room will be distinguished by one of the symbols. The *first* room will have the tower of Babel painted upon it; and to fix this more strongly upon the memory, it may be observed that the proprietor of the whole is a great linguist, and the idea of the confusion of languages cannot fail to suggest to us the *Tower of Babel*, the distinguishiug symbol of this room.

The *second* room will be designated by the *Swan*; the occupant of this room may be much attached to the study of ornithology; he may be fond of birds, and possess an extensive aviary.

The *third* room will have Parnassus or the Mountain; this room may be the habitation of a *poet*, or of one who has a taste for poetry. If there be not a sufficient number of rooms in our own house, some of those belonging to our friends may be engaged, whether they be at London, Edinburgh, or Vienna. Having placed them ideally, in order, we are now ready to fix whatever is required to be remembered.

For example, in the history of England it will be found that William the Conqueror began to reign in 1066. This date must be placed in the tenth room, sixth stripe, and sixth place. The tenth room will belong to Goliath, and we shall have associated this idea with the room, by comparing the possessor to Goliath in size and shape, or in character for courage, bravery, or any other similar quality. The second king is *William Rufus*, who ascended the throne in the year 1087; he will, of course, be placed in the same room, on the eighth stripe, and seventh place, and the whole of the stripes and places between this and the former, may be devoted to William the Conqueror.

Charlemagne, who was crowned Emperor in the year 800, is naturally placed on the ceiling of the eighth room,—the room belonging to Midas. With Charlemagne may be arranged Egbert, or any king of another country whose reign was coeval with that of Charlemagne.

When the present historical arrangement has become familiar, it will be proper to take a sheet of paper for every century, forming a room and making the proper division of three walls and a floor, as above described. A particular fact may be then put upon paper, by sketching a rude outline of the circumstances, by figures of animate or inanimate beings; this, though it may appear to some unnecessary, will imprint the different facts upon the memory more forcibly than the usual mode of committing them to writing.

It is not to be supposed that each division will become more difficult in proportion as it is filled with events. The reverse indeed will be the case. It is a much greater labor to retain a few facts scattered throughout the different squares, than it is to remember a multiplicity of them, each being arranged in order. If we take a few insulated facts, there can be but little connexion between them; but when there is a multiplicity of events disposed in order, by associating them together, the one assists the remembrance of the other, and a strong connecting chain is formed, the links of which can scarcely be broken. The facility of committing these facts to memory is increased by their number. In selecting the facts we should be careful to take the simple facts; and not to mistake their connecting circumstances, or consequences, for the facts themselves.

It may be asked, perhaps, is there not occasion for a different room for every country? Certainly not. The history of one country must never be separated from the history of another country. We can scarcely speak of an event of very great political importance which has happened in England, without involving the history of most of the European States, of the East Indies, etc. etc. The political interests of one country are almost always united with those of another country. Sometimes, the events of one nation are of high importance; sometimes those of another nation. The gradual progress of a nation to power, and the gradual decline and extinction of that power, must be familiar to every one who is, in the slightest degree, acquainted with history. The wheel of power, like the fabled wheel of fortune, is continually revolving; and, as one nation, in one century, takes the lead in importance and influence; the next views it sunk into insignificance, and consequently very unproductive of peculiar or striking events.

Some, however, may object, that we shall not be able to distinguish any particular event, so as to assign this event to its proper country. There can be, however, no fear of this. Some particular circumstances connected with, and inseparable from, the fact itself, cannot fail to

distinguish the country in which this event happened, whether in England, France, Spain, Germany, or any other part of the world.

Hitherto, that period of time only has been considered which is posterior to the birth of Christ. Antecedently to this period, however, there is a space of four thousand and four years. This time, though embracing a large number of years, is by no means so pregnant with events as that after the Birth of Christ.

Plate I, fig. 8, represents the series of centuries, and on the left of this series are placed the events that happened from the Creation to the Birth of Christ.

It would be easy to assign to each year its proper place; but the first three thousand years are so barren of events, that it would be useless to do so; and the difficulty of remembrance would be enhanced by the paucity of dates worthy of being committed to memory. We ought not to take rooms where there is nothing to fix. It is only necessary to know the true series of facts; the years must be put into words. There are but four years before the four thousandth year. In these the Creation and the birth of Cain and Abel, are the principal events. From 4000 to 1000 there are not more thirty pricipal facts. If there were 300, not more than three rooms would be required. The period which includes the histories of Greece and Rome, will produce a greater number of facts; and there will be more certainty as to the dates. From the building of Rome then to the Birth of Christ, there will be oocasion for seven rooms. (See plate I. fig. 9.)

The remarks will suffice for the ancient and modern history—for the antediluvian and postdiluvian periods. We may, however, wish to remember not only the principal facts in general history, but to enchain and fix the fleeting visions of the moment—those passing incidents which interest, amuse, or instruct us. "The sacred treasure of the *past*," is not the only "substantial shadow" which will be registered in our ideal repository. We shall be enabled to arrange *future events*, and thus have an orderly disposition of every circumstance of business or pleasure in which we may be engaged.

To fix the events of a whole year, more places are required. Our year is divided into months, weeks, and days; and into four seasons. Every season contains three months, and each wall contains three stripes. (See plate I, fig. 19.) The months are named first, second, third, fourth, and so on; on each stripe are the days of the month, and consequently a sufficient number of squares or places, in which the facts and events may be arranged. To remember the first, second, and third months, the figures may be changed into letters, and the letters into words, if necessary. If it be required to commit to memory some remarkable circumstance which happened on the 25th of June, we should take the figures 6, 25, (sixth month, 25th day,) and change them into letters; these would be *d, n, l;* of this we might make *Daniel*, or any other word that would associate better with the nature of the event. If it be 6, 8, (June 8th,) we might say *d, v*, (dove,) and connect it with the leading feature of the event.

The advantage of resorting to symbols for the representation of sensible objects, has already been insisted upon: it must, however, be repeated, that the rude outline of any one object, if drawn upon the paper, will contribute more essentially to imprint the circumstance upon the memory, than whole pages of labored description and minute detail. The Egyptian hieroglyphics were formed in this way, and the key to their interpretation, (the combination of the different images,) was a sacred trust reposited with the priests. The symbols which may be formed, will serve the purpose of secret writing: for we may be well assured, that they will be as unintelligible to every one but ourselves, as the priest-writing was, to the *profanum vulgus* of Egypt.

CHAPTER VI.

SYSTEMATIC TABLES.

THE knowledge of systematic tables is peculiarly important to the student in any branch of science, whether it be botany, zoology, chemistry, mineralogy, etc.; and the mode of fixing these tables in the memory, must be deemed of very great use to all who are concerned in such pursuits. The application of this art to such tables will be shown in the following Mineralogical Table of HAUY.

The characters of Minerals are of three kinds, *Physical*, *Geometrical*, and *Chemical*.

I. *PHYSICAL CHARACTERS.*

I. IN GENERAL

1. SPECIFIC GRAVITY, (according to the Hydrostatic balance of Nicholson.)

2. COHESION. 1. *In Solids is proved:*
   - I. By Friction with a File. *i* Yielding. *ii* Not yielding.
   - II. By rubbing the angular parts of one mineral against the angular parts of another mineral.
   - III. By Percussion with a hammer. *i* Difficult to be broken. *ii* Brittle. *iii* Crumbling.
   - IV. By a Steel. *i* Giving Fire. *ii* Not giving Fire.
   - V. By flexion or pressure. *i* Simply Flexible. *ii* Elastic. *iii* Ductile. *iv* Soft. 1. In its own nature. 2. Having imbibed a fluid.
   - VI. By the force of Traction. 2. *Liquids* (yielding with the slightest pressure.)
     - I. By moistening the hand.
     - II. By not moistening it.

II. PARTICULAR. (As found by the senses.)

1. IMPRESSION UPON THE TONGUE.
   - I. *By Taste.* *i* Salt. *ii* Astringent. *iii* Sweetish. *iv* Pungent. *v* Bitter. *vi* Urinous.
   - II. *By Adhesion.*

2. FEELING. I. *Unctuous and Greasy.* II. *Smooth, but not greasy.* III. *Harsh.*

3. SMELL. I. *By Breathing.* II. *By Rubbing.* III. *By Heating.* *i* Aliaceous, or garlic-like. *ii* Bituminous. *iii* Sulphureous.

4. SOUND. I. *By Percussion.* II. *By Bending.*

5. LIGHT. I. *By Reflexion,* [producing Colour.] *i* Colours of the

mass. 1. in their species. 2. In their distribution. *i Uniform. ii Variegated.* 1. in stripes. 2. In spots. 3. In their action. 1. By change of colour. 2. By reflex irises. *ii* Colours of the Streak. 1. Similar. 2. Dissimilar. *iii* Colours of the Powder. 1. Similar. 2. Dissimilar. [Producing Lustre *i* Brilliant. *ii* Dull. *iii* Greasy. *iv* Silky. *v* Pearly. *vi* Metallic. *vii* Pseudo-Metallic.

II. *By Refraction.* [Transparency.] 1. Limpid. 2. Transparent but coloured. 3. Translucid. 4. Opaque.

III. *By Phosphorescence. i* By heating. *ii* By rubbing.

6. ELECTRICITY. I. *Passive. i* By communication. *ii* By rubbing. 1. Vitreous. 2 Resinous. *iii* By heating. [Vitreous on one side, and resinous on the other.] II. *Active. i* Vitreous. *ii* Resinous. *iii* Neither vitreous nor resinous.
7. MAGNETISM. I. *Simple.* II. *Polar.*

II. *GEOMETRICAL CHARACTERS.*

I. FORM.

1. DETERMINABLE. I. Elementary. II. Secondary.
2. INDETERMINABLE. I. By rounding off the surfaces and angles. II. Striated and rough. III. Amorphous bodies, [i. e. bodies of an irregular form.]
3. IMITATIVE. I. Bodies formed by concretion. III Pseudomorphous bodies, [i. e. such as have assumed the form of another body, for which they are substituted.]

II. STRUCTURE,

1. LAMINATED.
2. LAMELLATED.
3. STRATIFORM.
4. FOLIATED.
5. FIBROUS. *i* With parallel fibres. *ii* With radiated fibres.
6. GRANULATED.
7. COMPACT.
8. CELLULAR.

III. FRACTURE.

1. DIRECTIONS. I. Longitudinal. II. Transverse. III. Indeterminate.
2. VARIETIES. I. Conchoidal. II. Smooth. II. Rough. IV. Scaly. V. Articulated.

III. *CHEMICAL CHARACTERS.*

I. BY FIRE.

1. WITH STRAW. I. Fusibility. II The result of Fusion, III. The Reduction of Metallic Substances.
2. WITH RED-HOT COALS. I. Volatility. II. Detonation. III. Decrepitation. IV. Ebullition.

II. BY ACIDS, [and in particular by the Nitric Acid.]

1. DISSOLUTION WITH EFFERVESCENCE.
2. DISSOLUTION WITHOUT EFFERVESCENCE.
3. REDUCTION INTO JELLY.

III. BY ALKALIES.

1. DISSOLUTION OF COPPER BY AMMONIA, forming a beautiful blue Colour.
2. THE VAPOUR of SULPHURETTED AMMONIA, blackening the Carbonate of Lead.

The characters of minerals, as we have seen, are physical, geometrical, and chemical. The *physical* characters are general and particular; and both these are again subdivided. The *general* physical characters must be first considered. In order to fix these, we should take a room which is familiar to us, and place the various divisions upon the different objects in that room, which are also well known to us, inventing some connecting circumstance by which we may be the better enabled to remember the particular division of the table.

Having a room in which there are four walls, we take the first, which is on our left hand, and commence with *specific gravity*, the first division of the general characters, and to fix this in our minds a *balance* is placed on the top of the wall, near the ceiling. The next division is *cohesion*, which is put by the end of the *balance;* if we ask what preserves the whole wall in its present firm state, the answer will be *cohesion*. There is now occasion for a *sofa*, which is placed against the lower part of the wall, upon which the solids must be put; cohesion in solids is proved in six different ways. In one corner of the sofa, a *file* is placed which will call to mind the first mode, friction with a file; in another corner, some minerals of an angular shape; and thus we must proceed to fix the six different divisions. The sub-divisions will be easily remembered, if connected, in some way, with the principal outlines, which are thus permanently fixed. Having filled one wall with the general physical characters of minerals, the particular characters are next to be considered. The *particular* physical characters of minerals are known 1. by taste, 2. by adhesion. Another wall is now needful, in which there may be a *door:* on this door a *tongue* is placed as the emblem of *taste;* the door being divided into six compartments, in the first is found a *cube of salt*, to convey the idea of the saline; on the second a *string* for astringent; in the third some *sweetmeats* for

sweetish; in the fourth a *knife* for sharp, which may cut the string in the second compartment; *bitter* in the fifth division, will come immediately after sweetish, and cannot fail to be remembered by the contrast which it presents; *urinous* is in the *sixth* and last division, and will need no symbol. In this way must the pupil proceed with the remaining divisions of the table, fixing each upon an object, and connecting some striking circumstance with the object, that will afford a permanent idea of the system which he is desirous to acquire.

CHAPTER VII.

POETRY AND PROSE.

The first materials of a poetic edifice are to be found in metaphors, allegories, and in various kinds of fiction; and it is thus all images, comparisons, allusions, and figures, particularly those which personify moral subjects, concur in adorning such a structure. When these images are reduced into verse, the ear is delighted to a high degree, and the mind insensibly repeats them while they eye reads them. This is particularly the case with rhyme. Cadence, harmony, and especially rhyme, afford the greatest assistance to the memory that art can invent; and the images, or poetic fictions, that strike our sense, assist in engraving them deeply on our minds.

When a historical narrative is related in *prose*, the facts only are stated in a plain, regular order, without any minute description of the differrent objects which occur in the course of the history. The poet, however, proceeds differently. He describes, minutely, every object which presents itself; if it be a mountain, we have a lively description of its situation, the objects seen from it, and the trees or houses upon it. Should there be a castle on this mountain, its ancient and present state is accurately described, together with the characters of its different pos-

sessors and the contests for the occupation of it: these descriptions we read with pleasure, and they are more firmly imprinted upon the memory by the variety and succession of images employed in them.

In order to commit to memory any particular piece of poetry which may be divided into stanzas, each consisting of four, six, eight or ten lines, etc., it is necessary to take one stanza at a time, to read it over, and to select the principal objects or images, and combine them with the *first* symbol; attaching the next stanza to the second symbol, and so on with the remaining stanzas. By these means we are not only enabled to recite the whole poem in regular order, but to repeat any one or more stanzas in any order,—to determine the numerical situation of any line or word in the poem—and to say how often any particular word may occur. As we are able to repeat any stanza in the poem, it will only be needful to count the lines or words, if it be required to determine the numerical situation of any line or word.

It will not be difficult to apply these principles to the repetition of poetry. A single illustration, perhaps, will be sufficient; and for this purpose we take the first stanza of Goldsmith's *Edwin* and *Angelina.*

"Turn, gentle hermit of the dale,
"And guide my lonely way
"To where yon taper cheers the vale
"With hospitable ray."

We must here reflect, and imagine that we see a *Hermit* standing on the *Tower of Babel*, and turning round with inconceivable rapidity; a very large *taper* is placed upon his head. Angelina is walking by the tower and calling out loudly to the hermit 'to guide her lonely way;' the *taper* cannot fail to suggest the the remainder of the stanza.

In a poem that is not divived into stanzas, we must take 4, 6, 8, or 10 lines, preserving the connection, and fix them upon a symbol. Several small pieces of poetry may be readily imprinted upon the memory by placing them upon the pictures, or furniture, of the wall of a room with which we may be acquainted. Though the

symbols are not here actually resorted to, yet the principle that is pursued is precisely the same, for what are the symbols, but pictures which line the walls of our imaginary rooms?

When *Prose* is to be committed to memory, the particular passage, or chapter, should be read over carefully two or three times, and having selected the principal images or objects, it will be necessary to form a narrative by combining them with the different symbols. We should take a few lines only at a time, and proceed gradually in fixing the various objects presented to us.

To remember the principal points in a *Sermon* which is regularly divided into parts, it is only needful to take the different heads or titles as they are given, and arrange them on the ceiling of the church or chapel, placing some on the cornice, and others in various parts, in regular order. Or, a sort of imaginary tree may be supposed springing from the centre of the ceiling, and the proofs and illustrations adduced by the preacher, may be suspended to its branches. The method will be rendered more effectual, if a symbol of the idea be formed, as for *Justice* a pair of scales, etc. etc. This, however, is not essential.

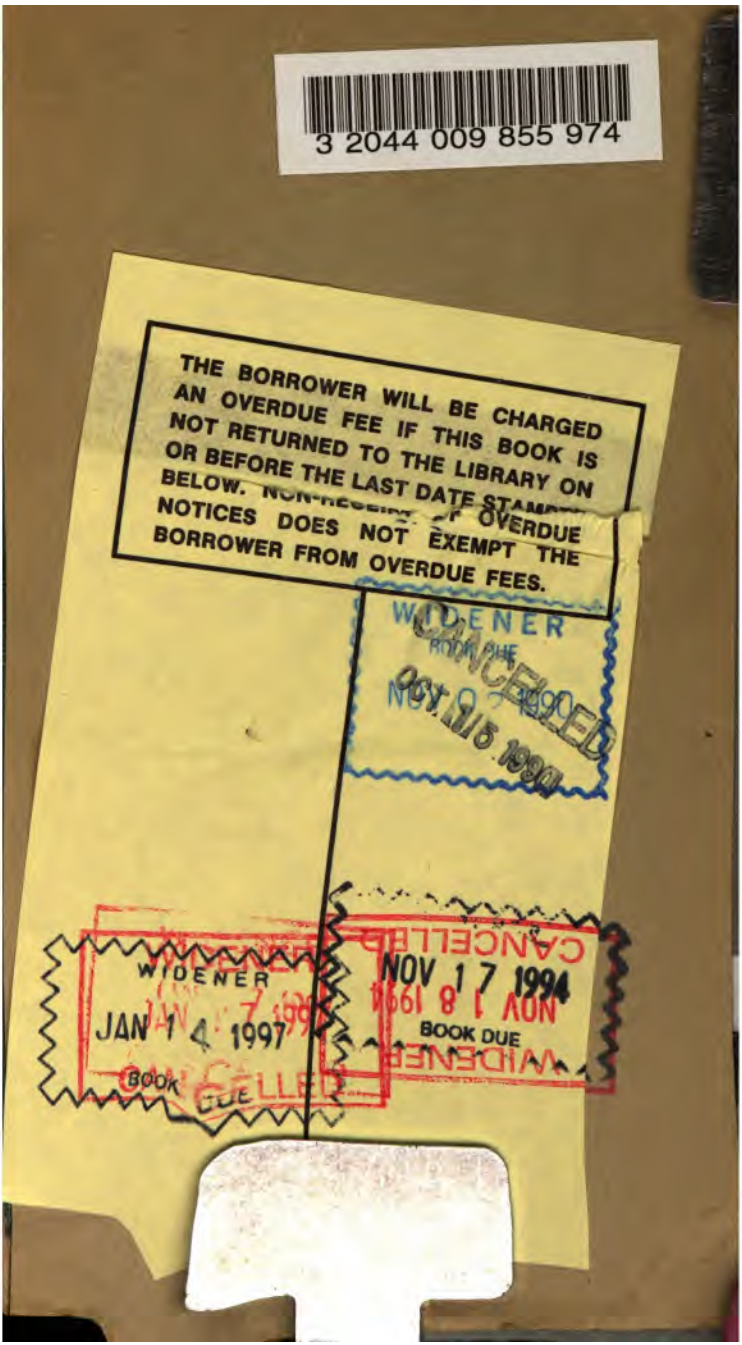
Any *public speaker* may arrange the arguments of his adversary on various parts of his person, and thus be enabled to review and answer a multiplicity of observations made by many different speakers. The first remark might be placed on his head, one in each eye, one in each ear, another on his nose, mouth, etc. etc. If it be required to remember a high number, we need only resort to the symbols: for instance, 27, 8, 19 will be fixed by remembering the names of *Don Quixote*, *Midas*, and *Robinson Crusoe*, the 27th, 8th, and 19th symbols.

The advantages of this part of the system to the different professions are very great. The *minister—the legal student*, and the *public debater*, may all practice this method with success. The application of these principles will also render an essential service to the *merchant* and the *man of business*, in the various concerns of life.

Having now completed our account of the New Art of Memory, we shall conclude in the words of *Grataroli*, as translated by *Fulwood*, in his *Castel of Memorie*.

" *IT SUFFICETH THEREFORE, THAT WE HAVE EXPRESSED A METHODE OR COMPENDIOUS WAYE, THE WHICHE WHOSOEVER FOLLOWETH SHALL EASELYE* (so that exercise be not lackynge) *GET & ATTAYNE THE CERTEINE AND SURE REMEMBRAUNCE, OF MANYE AND SUNDRYE THINGS, AS DUE OCCASION SHALL REQUIRE*: but as for the slugglish and ydle, let them slugge and sleepe still, to whome all things are displeasing."

THE END.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